

### **Vanuatu: taro beetle and fruit fly activities**

LRD Entomology team (Sada N Lal, Fereti Atumurirava and Naca Waqa) travelled to Vanuatu in August to conduct taro beetle and fruit fly management activities. Taro beetle management activities included harvesting trials, preparing corm samples for residue analysis at USP and preparing taro nursery for next series of trials. The trials are to evaluate the chemical *Confidor* for the control of taro beetle. For fruit fly management the Entomology Team carried out the final field attractancy trial of Van-lure, reviewed fruit fly surveillance and assessed laboratory rearing of fruit flies. Data from Van-lure attractancy trials will be analysed to find appropriate rates for protein baits for recommendation to farmers.

### **Papua New Guinea: weed management activities**

Coordinator Weed Extension Mr Warea Orapa visited PNG recently to carry out following activities:

1. Facilitated two training courses at Port Moresby and Rabaul on detection and prevention of invasive weeds in collaboration with SPREP Invasive Species Programme officers.
2. Followed up on parthenium weed eradication in Lae, Morobe Province, funded by SPC since mid 2002. Work is not progressing as expected owing largely to lack of workers, as there are only a few quarantine officers based at Lae Port, the busiest in PNG. It was suggested to hire two short-term hands to work full-time for five months to carry out weekly spraying and daily search for new weed regrowth. This regime will continue for five months at the three outbreak sites, by which time parthenium should be eradicated from PNG.
3. Carried out surveys for weeds and invasive ants in New Ireland Province and Manus Province in collaboration with national counterparts from the PNG National Agricultural Quarantine and Inspection Authority (NAQIA) and the National Forest Research Institute (FRI). In Manus Province, visited Andra and Ahus islands and discussed with respective ward councillors regarding the invasion of the islands by crazy ants (*Anoplolepis gracilles*). Weed specimens collected have been lodged at the PNG National Herbarium based at the Forest Research Institute (FRI) in Lae, while ant specimens collected from the surveys will be either sent to Australia or CABI for further identification by NAQIA.
4. Met NARI Director General Dr R. Ghodake and Projects Co-ordinator Mr Sim Sar to discuss management of the proposed ACIAR-funded project on weed survey and mapping project. NAQIA have expressed interest to provide in-country project leadership with SPC as contracted agency.

While in New Ireland Province the team discussed the threat posed by fire ant from Bougainville and progress on the ACIAR-supported chromolaena biological control. The general public is very much aware of the chromolaena problem and are further encouraged to help spread the bio-agent to new areas.

### **Food security for atolls**

A workshop to discuss food security in the Pacific especially for atoll countries was held in Kiribati 19–22 October. The workshop was officially opened by the Minister of Environment, Lands and Agriculture Development (MELAD) Hon. Martin Tofinga (*shown in photo*), who told



participants of the importance of food security contributing to health and wealth of a nation. He said marginalised environments are more challenged with food security issues. He pointed to imported refined foods as examples of food insecurity and production of local foods as food security. A background paper by Dr Mareko Tofinga, Head of Crop Science Department, USP Alafua Campus, provided a good overview of atoll agriculture and its special limitations on food production. A paper by the Permanent Secretary of MELAD, Mr Tukabu Teroroko, focused on government's role in addressing national food security and how it works closely with the private sector to seek technology to improve food productivity.

SPC was represented through the participation of two staff of the Land Resources Division. Dr Siua Halavatau, DSAP Extensionist,

discussed the critical issue of poor soils in atoll conditions and the work DSAP is carrying out in preparing compost. Mr Emil Adams presented on agricultural information for food security, focusing on communication activities by LRD to address atoll agriculture.

Former Agricultural Liaison Officer (ALO) and Head of Extension Ms Kina'ai Kairo assisted by current ALO Ms Taan Teraira organised the workshop including an elaborate traditional welcome ceremony.



SPC have in the past through the Regional Germplasm Centre (RGC) supplied the Agriculture Department with tissue culture bananas (*shown in photo above*), sweet potato and taro. All these crops are doing well at the research station at Tanaea under the supervision of Research Officer Mr Tianeti B Ioane.

### **IPM and organic gardening promoted to Fiji schools**

Agricultural teachers from primary and secondary schools in the Lautoka area learned integrated pest management (IPM) techniques and organic agriculture in a one-day workshop held 28 September. Extension staff of the Ministry of Agriculture, Sugar and Land Resettlement (MASLR) from Lautoka, Nadi, Ba and Tavua also attended the workshop. There were 45 participants in total.

SPC Land Resources Division organised the workshop led by Entomologist Sada N Lal and assisted by Fruit Fly Technician Naca Waqa and Extension Assistant Salend Kumar.

Resource persons attending the workshop included Moti Lal, Registrar of Pesticides and Principal Plant Protection Officer from Koronivia Research Station, plus two staff of the National Food and Nutrition Centre, Nutritionist Ms Arti Pillai and Food Security Officer Ms Dhana Raghuvaiya.

Participants showed much enthusiasm in the subject matter, especially the teachers, who rated the training very high. As a result of the workshop and to further promote IPM and organic gardening there will be a demonstration garden set up at Drasa Indian School. Similar programmes are planned for Ba, Rakiraki, Labasa and the Central Division.

### **Plant disease survey for French Polynesia**

LRD Plant Virologist Dr Richard Davis visited French Polynesia recently to carry out plant virus and virus-like disease surveys for the major islands of French Polynesia, primarily to update national pest list database. A general plant disease survey in 2001 by SPC and SDR (local Department of Agriculture) made several virus identifications. Mr Leon Mu, Plant Pathologist with the Agriculture Department, assisted in the surveys. The survey team attempted to visit as many different areas as possible. Crop plants of economic importance and also other plants were examined at each survey location. Samples (leaves and other plant parts) thought to be infected by intra-cellular pathogens were returned for analyses after surface sterilisation and desiccation. Some were sent for identification overseas, but most were returned to Fiji (under Fiji Quarantine and Inspection Division permit No. 48681) for

analysis in the SPC Nabua plant virology laboratory and/or the USP Institute of Applied Sciences (IAS) DNA laboratory. Some outcomes from the surveys:

- Papaya ringspot disease-like symptoms have been observed once on the island of Moorea near Tahiti in 2001. This survey confirmed the presence of PRSV -P at two locations on Moorea Island (Haapiti and Opunohu) in double antibody sandwich enzyme linked immunosorbent assay (DAS-ELISA) tests conducted at the SDR Papara food technology laboratory.
- A suspected outbreak of papaya ringspot disease on Tubuai Island was investigated. Possible ringspot symptoms had been seen around two weeks before the survey by a SDR staff member in a domestic property at Taahueia. The grower had responded by cutting down and burning all (<10) affected papaya trees. The stumps were starting to produce new shoots when inspected. Four samples of these young leaves were collected and screened for PRSV infection by DAS-ELISA at the SDR Papara food technology laboratory. All tested negative.

### **FSM disease surveys**

LRD Plant Pathologist Dr Jacqui Wright was in Palau and Yap to conduct disease surveys:

1. To update the disease lists through surveys.
2. To assess the relative importance of the diseases and make recommendations.
3. To specifically search for the disease causing dieback of betel nut trees on Guam in Palau and Yap.

Both Palau and Yap State have been well surveyed in the past and the disease list is comprehensive. However, it is important to keep the list current. All major crops on Palau were surveyed and 147 specimens were collected. Many of the common Pacific fungal diseases were observed and collected and some will be new records for Palau.

Ailing betel nut trees were cut down as preventative measure for the betel nut disease found in Guam. Samples were isolated to a selective media and resulting cultures sent for identification. It appears the disease is not present in Palau.

Surrounding countries Guam and FSM have recorded fusarium wilt of bananas, so the survey searched for the disease in Palau. Bananas showing symptoms of wilting and yellowing of the leaves, typical of fusarium-infected bananas, were closely examined. However, every single one checked was infected with *Marasmiellus inoderma* and did not display the reddening of the vascular tissue typical of fusarium wilt. Sanitation appears to be the main cause for the marasmiellus fungal disease, which is not considered a problem.

Yap is recovering from Typhoon Sudal that hit in April. The environment is in a disturbed state and could be one reason to explain the absence of signs of many diseases recorded previously. Although FoC type VCG 0123 has been recorded from Yap, many symptomatic bananas that were cut down did not have the typical vascular reddening. There was some infection from *Marasmiellus inoderma* but nowhere near the levels observed in Palau.

### **HTFA operational in Tonga**

Tonga successfully completed a Bilateral Quarantine Arrangement (BQA) with NZMAF to export breadfruit, chillies, eggplant, pawpaw, tomato and avocado. NZMAF accredited Tonga to export these produce using the Hot Temperature Forced Air treatment plant.

### Completed PPS activities in PICTs for October

<i>PPS Staff</i>	<i>PICT</i>	<i>Activity</i>
Warea Orapa	New Caledonia	Weed survey
Jacqui Wright Takaniko Ruabete Konrad Englberger	Palau, Yap	Plant pests and disease survey
Richard Davis	French Polynesia	Plant virus disease survey
Sidney Suma	New Caledonia	ERP workshop
Konrad Englberger Sarah Pene	Palau	PLD workshop
Naca Waqa	Tokelau	Fruit fly activities
Emil Adams	Kiribati	Food Security Workshop Taro Beetle awareness

### PPS Staff Travel

Dates	Country	Staff	Activity
5 – 12 Nov	French Polynesia	Sada N Lal Steve Hazelman	Entomology activities Extension activities
2 – 5 Nov	Samoa	Sarah Pene	Tokelau PLD training
8 – 12 Nov	Canb/Australia	Jacqui Wright	Plant Pest Surveillance Workshop
15 – 19 Nov	Fiji	Naca Waqa	Fruit fly host survey and collection in Nadarivatu
20 – 27 Nov	Wallis et Futuna	Salend Kumar	PLA
23 – 24 Nov	Fiji	Entomology	Taro Beetle Meeting
20 – 28 Nov	Niue	Bal Narayan	IPM development and monitoring studies of cabbage pests and their natural enemies
29 Nov – 10 Dec	Canb/Australia	Emil Adams	ACIAR Publications attachment

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